

### Abstract of the Disclosure

The invention is directed to compositions comprising mixtures of natural gas and dimethyl ether suitable for use as fuel compositions, and particularly to blends of dimethyl ether and a natural gas derived from LNG produced in an LNG process. The dimethyl ether can be added, for example, to a lean natural gas to improve the heat value thereof, and in embodiments, the dimethyl ether is conveniently derived from low value CO<sub>2</sub> contaminants present in a raw natural gas stream used to prepare LNG. Also disclosed are methods to prepare the mixtures.